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**TRACKING HEALTH PROMOTION DATA IN  
THE U.S. NAVY**

*A. Hoiberg*

*J. F. White*

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NAVAL HEALTH RESEARCH CENTER  
P.O. BOX 85122  
SAN DIEGO, CALIFORNIA 92186-5122

NAVAL MEDICAL RESEARCH AND DEVELOPMENT COMMAND  
BETHESDA, MARYLAND



## **Tracking Health Promotion Data in the U.S. Navy**

**Anne Hoiberg and Jack F. White**

**Health Services Research Department  
Naval Health Research Center  
P.O. Box 85122  
San Diego, California 92186-5122**

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## **SUMMARY**

### **Problem**

A need exists to create an instrument or process to provide information to naval decision makers responsible for developing and assessing various health promotion programs. Data collected on such a standardized form or through an automated process could be used to evaluate the effectiveness of health promotion programs and to monitor the health status of naval personnel.

### **Objective**

The purpose was twofold: (a) to create a machine-scannable instrument, "Tracking Health Promotion Data," to be used to collect health promotion information and (b) to evaluate the effectiveness of the form in terms of understandability and efficiency by examining responses from a sample of officers and enlisted personnel who completed the instrument at the time of a periodic physical examination.

### **Approach**

The first phase of this study was the development of the "Tracking Health Promotion Data" form, a one-page instrument containing 29 demographic, life-style, health-status, and health promotion items. During the second phase, a pilot study was conducted at four San Diego area naval branch clinics to test the use of the "Tracking Health Promotion Data" form, primarily its ease in being completed and its understandability as reflected by percentages of completed items. Information was collected during a three-month period by distributing the instrument to Navy personnel ( $n = 307$  men and 34 women) who were scheduled for a required physical examination. Responses on the instrument were processed onto a computer file, and frequency and percentage distributions were compiled by age and sex for each item.

### **Results**

The overall completed response rate per item of the instrument was quite high. The major difficulties with the questionnaire were understandability and placement of four items. Also, the results suggested that clinic personnel should be explicitly instructed to fill in the blood pressure and cholesterol items and to supply missing information. In this sample, the percentage of smokers who entered the Navy was

lower than that reported in a 1988 Navy-wide sample, and the percentage of current male smokers represented a lower proportion than that reported previously. Another health promotion goal has been to reduce the number of alcohol abusers in the Navy; results of comparisons in this relatively small sample showed that the percentages of drinkers decreased with age. Overall, the percentage of men in this sample who responded that they consume alcoholic beverages was almost 77.0%. Other results indicated that cholesterol levels and the percentage of individuals with a back problem increased with age. Individuals who engaged in no exercise program accounted for 10.7% of the men's and 7.1% of the women's samples. The percentages of respondents who were rated as being overfat or obese were 11.1% of the men and 18.5% of the women; less than 4% of both groups failed the physical readiness test.

### Conclusions

Overall results of this study are consistent with other research which shows that progress is being made in the direction of improved life-style behaviors among Navy men and women. Other findings indicate that the tracking form developed can be completed with considerable ease. For the next phase of this study, the revised form will be assessed on a larger sample to evaluate its effectiveness.

### Recommendations

One of the objectives of monitoring Navy-wide health promotion data is to identify areas where progress should be improved and to target populations that need intervention programs. It is recommended that smoking cessation efforts be expanded if the goal of a smoke-free Navy is to be achieved even beyond the projected date of 2000. Another recommendation is to examine the feasibility of developing an electronic health promotion tracking system that can be implemented Navy wide. The possibility exists that electronic health promotion tracking records can be created on all naval personnel at the time of service entry, to be updated as physical examinations are performed or at times when changes in health status occur. Through these endeavors, the Navy would be able to determine how well naval personnel are doing in terms of meeting health promotion objectives and to identify specific intervention programs that need to be initiated or expanded.

## Tracking Health Promotion Data in the U.S. Navy

The U.S. Department of Health and Human Services recently released a report, Healthy People 2000, which describes the nation's public health goals and objectives for the 1990s (JAMA, 1990). The 298 objectives have been subsumed under 22 priority areas and clustered according to four major categories: health promotion, health protection, preventive services, and surveillance.

Many of the same objectives, which have been incorporated into health promotion programs, are being promulgated by the four branches of the military (Rothberg, 1987). In 1982, the Navy implemented a physical readiness program that was designed to promote health and physical fitness by establishing minimum standards for fitness and weight control and by emphasizing the need for all personnel to participate in wholesome life-style behaviors. More recently, physical readiness efforts in the Navy have become a part of a health promotion program that includes seven elements: smoking prevention and cessation, physical fitness and sports, back injury prevention, nutrition education and weight/fat control, stress management, alcohol and drug abuse prevention, and hypertension screening, education, and control.

Research programs have been initiated to evaluate the effectiveness of various health promotion endeavors in the military; the Naval Health Research Center has been tasked since 1983 with evaluating programs subsumed under the Navy's Health and Physical Readiness Program. Since that time, numerous research studies have been completed on almost all facets of physical readiness and health promotion. An example of such research includes a recently published report that provides information on cholesterol levels in Navy personnel who were scheduled for a physical examination at two naval hospitals during a three-month period (Trent, 1989). Another study surveyed types of tobacco cessation programs available to Navy personnel (Conway, Hurtado, & Woodruff, 1990); a recent project was initiated to collect data on the rate of smoking prevalence at accession locations in the Navy.

One of the difficulties in conducting this type of research is the unavailability of health promotion data on large samples of Navy personnel. To address this issue, the

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present study was designed to develop a single page, paper-and-pencil, machine-scannable questionnaire as an instrument for gathering selected health promotion data, such as tobacco use, exercise activities, and cholesterol and blood pressure levels. To be specific, the purpose of this study was twofold: (a) to create an instrument ("Tracking Health Promotion Data") to be used to collect health promotion information and (b) to evaluate the effectiveness of the form in terms of understandability and efficiency by examining responses from a sample of Navy personnel who completed the form during a periodic examination. The rationale for developing and compiling data from such an instrument is to provide information to decision makers responsible for creating and assessing various health promotion programs. Such a form would be used to evaluate the effectiveness of these programs while monitoring the well-being of Navy personnel.

### Method

Instrument. The first phase of this project involved the development of an instrument that not only would be easy to complete in a minimum amount of time but also could easily be processed either manually or mechanically. The result was the "Tracking Health Promotion Data" form, a one-page instrument containing 29 demographic, life-style, health-status, and health promotion items (Appendix A).

As can be seen in Appendix A, there are eight demographic items: years of education, age, rank or pay grade, race, marital status, sex, height, and weight. Items pertaining to life style include tobacco use (smoking and smokeless tobacco behaviors), duration of time since former smokers quit, amount of alcohol consumed, duration of time since former drinkers quit, and perceptions of one's diet. Other items are designed to solicit health-status information on the incidence of back problems, present status of the back, systolic and diastolic blood pressure levels, methods used to control blood pressure, and levels of total cholesterol, triglycerides, and high-density lipoprotein (HDL) cholesterol. The health promotion items include exercise habits and those related to testing: physical readiness test (PRT) results and percent body fat (normal, overfat, and obese).

Procedure. During a three-month period, a pilot study was conducted at four San Diego area naval branch clinics to test the use of the "Tracking Health Promotion Data" form, primarily its ease in being completed and its understandability as reflected by percentages of completed items. Information was collected by distributing the instrument to Navy personnel ( $n = 307$  men and 34 women) who were scheduled for a required physical examination. The demographic, life-style, and health promotion items were completed by each serviceperson. The physician or Hospital Corpsman was asked to supply such information as cholesterol levels, blood pressure values, and type of blood pressure control. Responses on the instrument were processed onto a computer file, and frequency and percentage distributions were compiled for each variable by age and sex. Cross tabulations also were computed to examine the relationship of responses among various questions, such as comparing PRT classification scores with percent body fat to provide an indication of the validity of the responses.

### Results

Instrument Understandability. The overall completed response rate per item was quite high. Items that had the fewest missing responses were the demographic and pay grade questions: age, sex, education, rank/pay grade, ethnicity, marital status, weight, and height. Other items with equally low percentages (< 5.0%) of missing data included alcohol use, smoking tobacco use, back problems, and injuries suffered during official PRT. Items that had less than 10.0% missing data were smokeless tobacco use (7.7%) and PRT classification score (9.7%). The two exercise and current status of the back items were considered to be somewhat difficult to understand, as reflected by the relatively high percentages of missing responses (11.6 to 13.4%). The item requesting percent body fat also had a fairly high percentage of missing information (18.4%), which suggested that this item should be rewritten and placed adjacent to the overall PRT classification score. The items pertaining to one's diet seemed to be confusing to respondents, specifically the two requesting information on whether or not one's diet was low in fat or sodium. Results of the cross tabulation

analyses tended to support the conclusions about item clarity and placement rather than reflecting a correspondence between items; for example, only 4.3% of this sample did not know either their percent body fat or PRT classification score. Also, all but two of the obese and overweight respondents knew their PRT classification score.

Instrument Difficulties. Blood pressure levels had a relatively high missing data rate (25.3%), although these values are recorded and available on all personnel. Other items with large proportions of blank answers were the three cholesterol levels; the percentage of incomplete answers was 20.1%, which did not include personnel less than 25 years of age who, in accordance with Navy policy, would not have their cholesterol measured. An explanation for this missing information was that cholesterol values were not easily obtained, as concluded by personnel at the clinics. Typically, the laboratory returns the cholesterol measures from five to seven days after the initial visit, a time lag that could lead to some slippage in completing the form. Such results suggest that more explicit instructions should be provided to clinic personnel to emphasize the importance of completing the cholesterol and blood pressure items on the forms.

Frequency and percentage distributions were compiled on the demographic, life-style, health-status, and health promotion items. Item percentages and means are presented in the following subsections.

Demographic Variables. Mean years of education were 13.2 for men and 13.6 for women. Women tended to be younger ( $\bar{X} = 27.6$  years) than men ( $\bar{X} = 30.7$  years). The percentage of Caucasians was relatively comparable for men and women at close to 74.0%; the percentages of Blacks, on the other hand, differed in that the percentages were 24.2 for women and 11.4 for men. Another difference between the sexes was the percent of Filipinos in each sample: 7.5% for men, as contrasted with none in the women's sample. The mean height for men was 70.1 inches, and the mean height for women was 64.3 inches. Mean weights were 177.7 pounds for men and 141.0 for women.

Life-style Variables. The overall percentages of personnel who smoked tobacco were 39.5% for men and 23.6% for women. A total of 7.2% of the men reported using

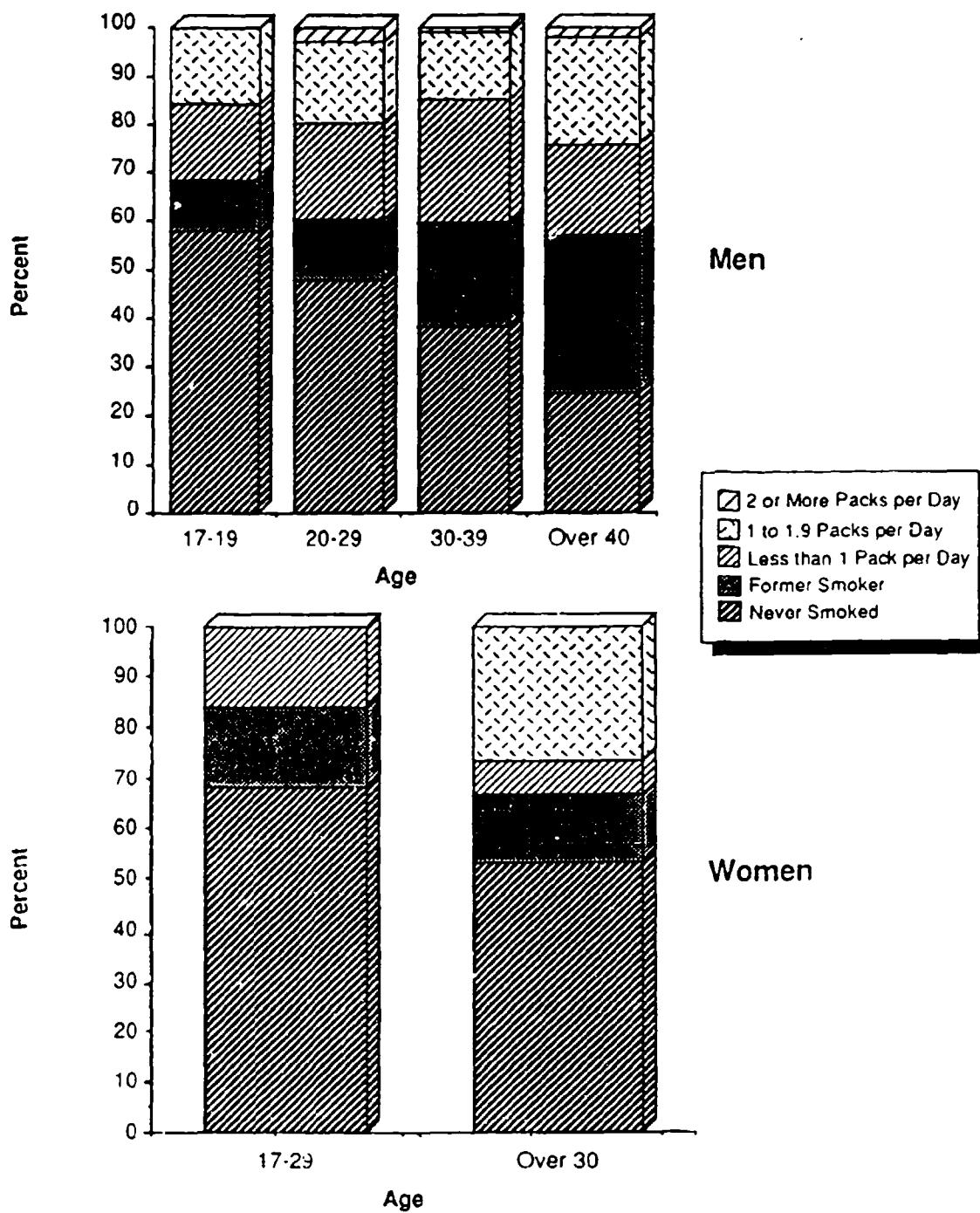
smokeless tobacco; no women reported current use of smokeless tobacco. Figure 1 illustrates the percentage distribution by age and sex of tobacco-smoking behavior in this sample of active-duty Navy personnel. The distribution showed the following percentages of men who had never smoked: 57.9% of the 17-to-19-year-olds, 47.8% of the 20-to-29-year-olds, 38.3% of men ages 30 to 39, and 24.5% of men over 40 years. The percentages for women who had never smoked were 68.4% of the 17-to-29-year-olds and 53.3% for women older than 30 years of age. The percentage of men who indicated that they were former smokers was 18.5%; 14.7% of the women claimed to be former smokers. Figure 2 depicts the percentage distribution of alcohol consumption among active-duty Navy personnel by age and sex. The percentages of men who consumed alcoholic beverages ranged from 22.9% who reported alcohol use of about one drink per month to 0.7% who drank more than 36 drinks per week. Only 23.2% considered themselves nondrinkers, and 7.4% identified themselves as former drinkers. The percentages of alcohol use were lower for women with 70.6% being either a nondrinker or one who drank no more than one drink per month.

Health-status Variables. Figure 3 shows the percentage distributions of total cholesterol levels among active-duty Navy personnel by age and sex. Levels below 199 mg/dL are considered low risk, between 200 and 239 are moderate risk, and above 240 mg/dL are considered high risk. The percentages of men with high-risk levels of cholesterol were 35.6% for the 30-to-39-year-olds and 40.0% for men older than 40 years of age. None of the women had cholesterol levels above the moderate-risk range of 200-239 mg/dL. The mean cholesterol levels were 206.3 for men (in a range from 100 to 408) and 182.6 for women (in a range from 158 to 221). HDL values ranged from 21 to 52 ( $\bar{X} = 44.6$ ) for men and 28 to 67 ( $\bar{X} = 49.1$ ) for women. Figure 4 illustrates the percentage distribution of back problems among active-duty Navy personnel by age and sex. Recurring back problems and those with continuing pain were reported by 20.8% of the men and 18.4% of the women. The percentages of men who had experienced a back problem increased linearly with age.

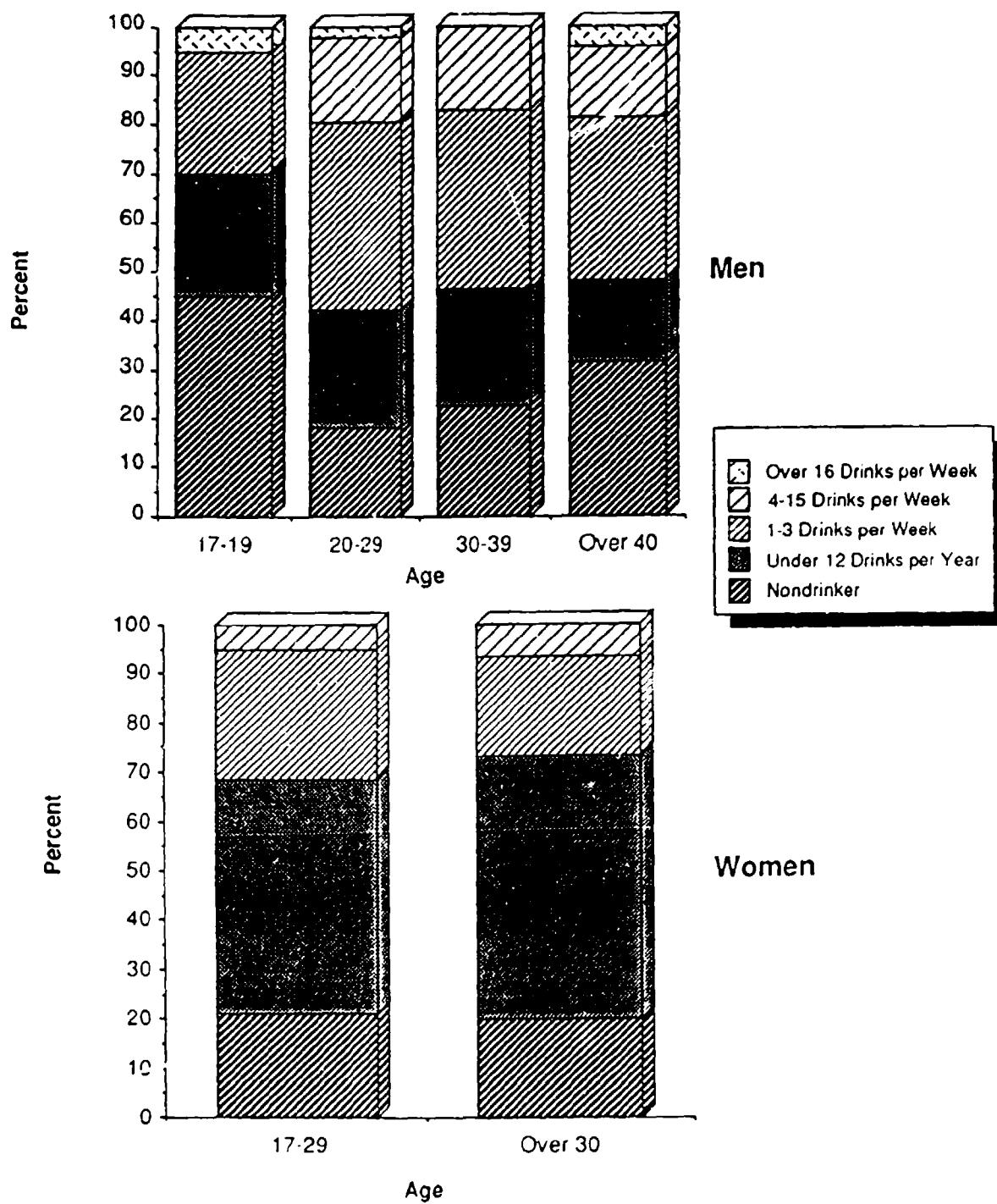
Health Promotion Variables. In examining the proportions of personnel who exercised, a total of 10.7% of the men and 7.1% of the women reported that they did

**Figure 1**

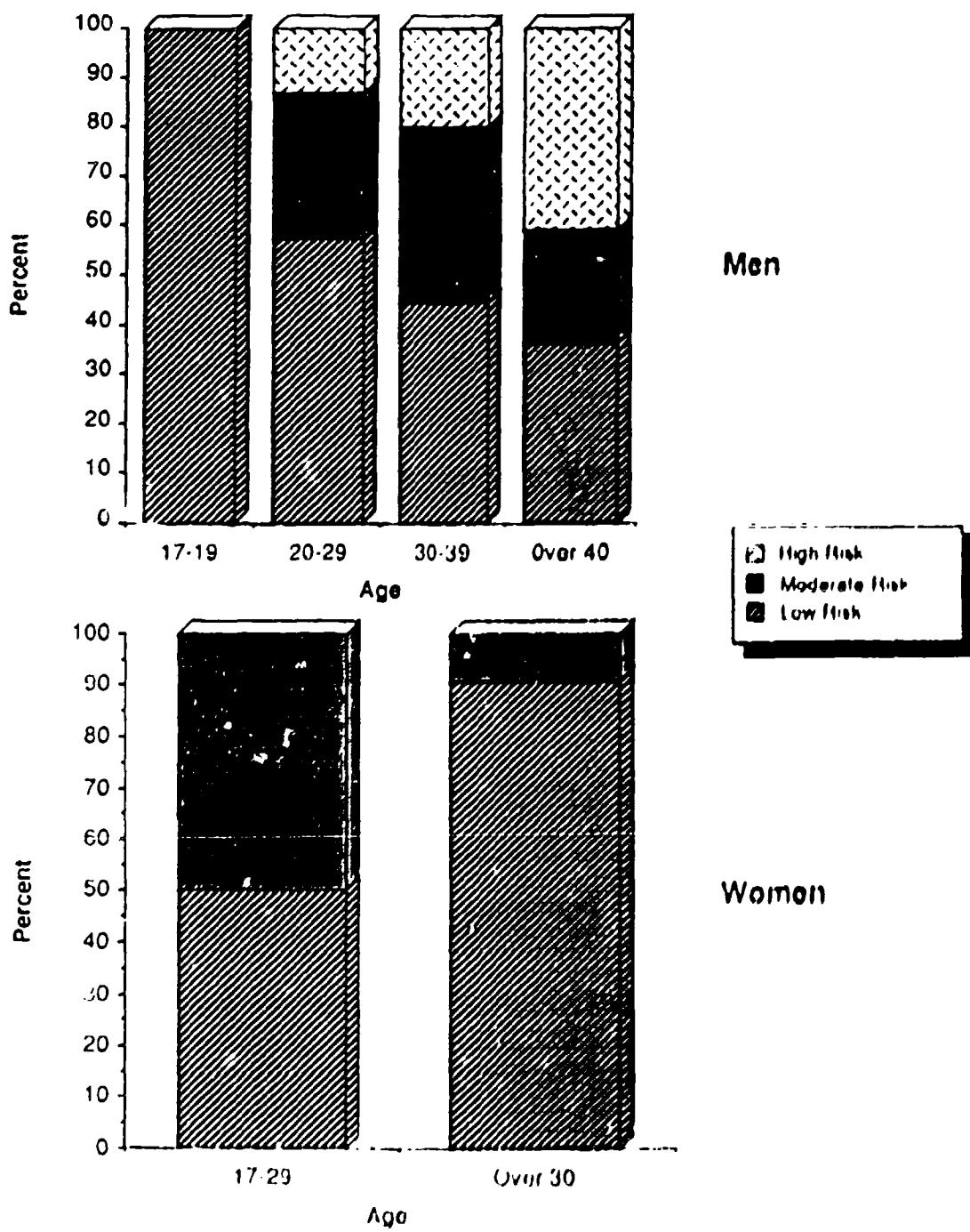
*Percentage Distribution of Tobacco-smoking Behavior among Active-duty Navy Personnel by Age and Sex*



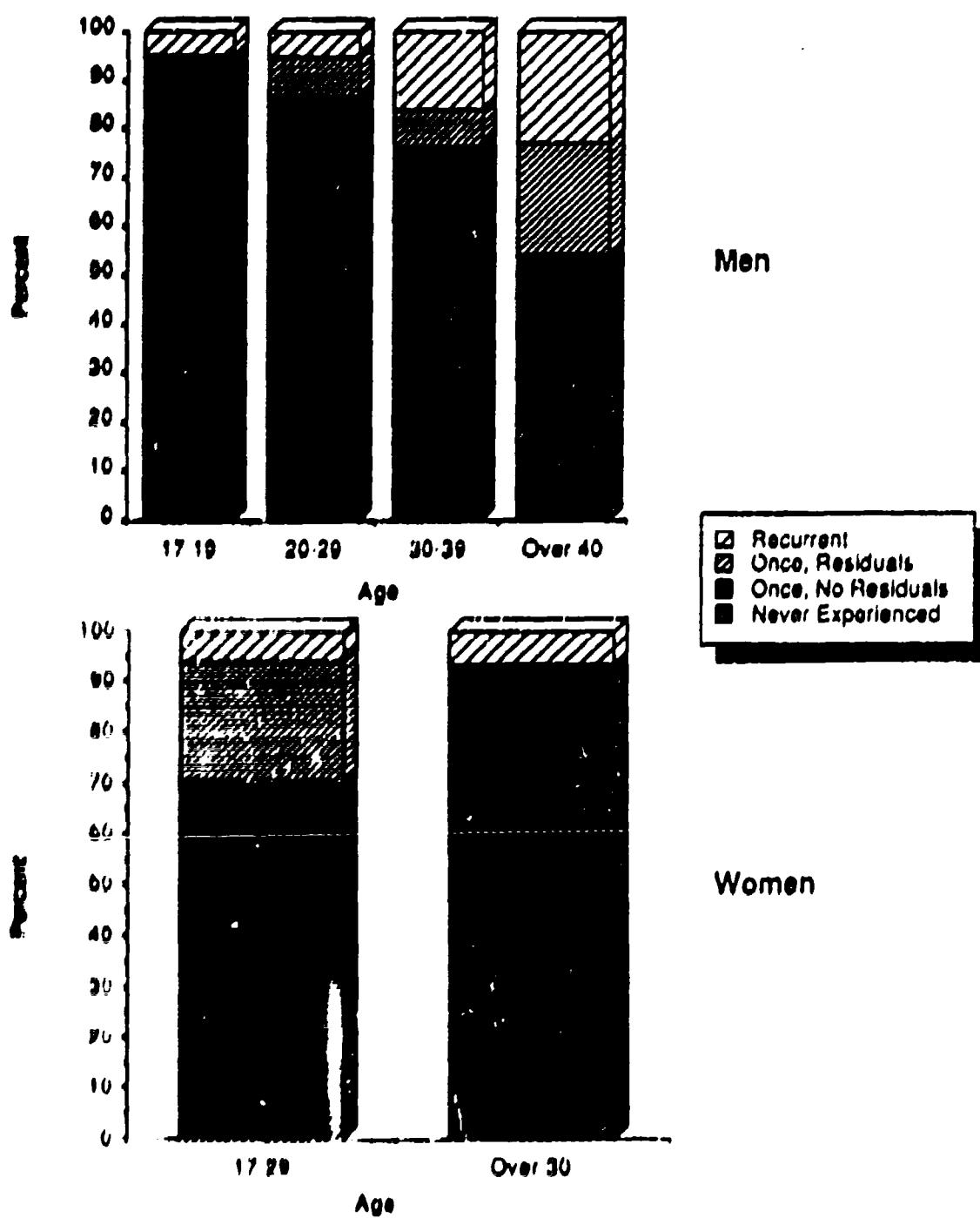
**Figure 2**  
*Percentage Distribution of Alcohol Consumption  
among Active-duty Navy Personnel by Age and Sex*



**Figure 3**  
*Percentage Distribution of Total Cholesterol Levels among Active-duty Navy Personnel by Age and Sex*



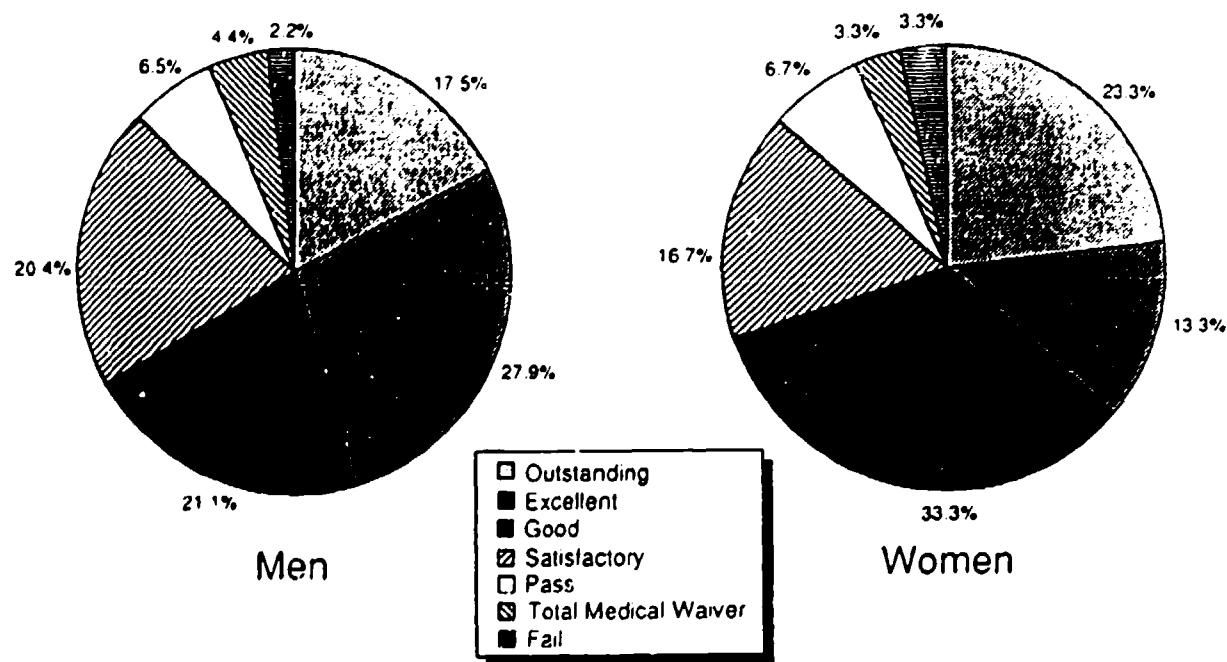
**Figure 4**  
*Percentage Distribution of Back Problems  
among Active-duty Navy Personnel by Age and Sex*



not exercise at all. On the other hand, 23.7% of the men and 10.7% of the women claimed to exercise five or more times per week. The duration of exercise per session ranged from 15 minutes to over 120 minutes. The category of 31-60 minutes of exercise per session was the most frequently selected response category for both men (39.6%) and women (48.4%). Figure 5 presents the percentage distribution of the physical readiness test results for active-duty Navy men and women. Very few of the men and women failed the physical readiness test: 2.1% of the men and 3.3% of the women. More than 65% of the men and women were classified as good, excellent, or outstanding. Total medical waivers consisted of 4.3% of the men and 3.3% of the women. The percentages of Navy personnel who were rated as being overfat or obese were 11.1% of the men and 18.5% of the women.

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**Figure 5**  
*Percentage Distribution of Physical Readiness Results among Active-duty Navy Personnel by Sex*



## Discussion

Results of this pilot study indicate that an instrument can be developed and used quite easily to collect health promotion data. Other findings of this study include recommendations for the rewriting of items and the redesigning of the instrument's format. Appendix B is the revised form that was designed to incorporate these recommendations. The format of the revised form places items in sections designated for the patient and medical examiner. The four patient sections include items that logically should be placed together, and several items have been clarified and a new item added (seat belt use). The item concerning one's diet has been expanded to ask for the number of servings consumed of eggs, fish, other meats, dairy products, grain products, fruits, and vegetables during a typical week. Also modified is the medical examiner's section which includes a set of specific instructions; a cover letter of explicit instructions to fill in the blood pressure and cholesterol items and to check the forms for missing data also will accompany each packet of forms mailed to the naval branch clinics.

Findings from this study differ from those reported on research conducted on trends in substance use in the four branches of the military (Ballweg & Bray, 1989; Ballweg & Li, 1991; Bray, Marsden, Herbold, & Peterson, in press; Conway, Trent, & Conway, 1989). To be specific, the percentage of male smokers in the present study (39.9%) is somewhat lower when compared with the 43.0% reported in a 1988 Navy-wide sample (Ballweg & Li, 1991). While the present sample size is smaller, the percent differential may reflect both a possible decrease in the number of young smokers entering the Navy as well as an increase in the number of older individuals who have quit smoking. The latter explanation is suggested by the increasing proportions of former smokers observed across age intervals.

The percentage distribution of smoking prevalence among 17-to-19-year-olds differs somewhat from that summarized in a 1988 Navy-wide study, which shows that 54.0% of all sampled personnel aged 17 to 19 consider themselves to be nonsmokers (Conway, Trent, & Conway, 1989). Although the present sample size is considerably smaller, the results suggest that the percentage of active-duty men who

have never smoked may be increasing. The highest percentage of individuals who have never smoked is observed among 17-to-19-year-olds: 57.9% of men and 75.0% of women. In the Navy survey cited above, it is shown that the average age of starting to smoke was 16 to 17 years and that 77% of all smokers in the Navy began before they entered active service (Conway et al., 1989). Canadian researchers report that only about 15% of their high school sample in 1985 had never smoked (Flay, Koepke, Thomson, Santi, Best, Brown, 1989). Other results, as published by the U.S. Surgeon General, indicate that smoking initiation is "relatively complete" by age 20 (U.S. Department of Health and Human Services, 1989). Also emphasized in the U.S. Surgeon General's report as well as in other reviews of the effectiveness of smoking prevention programs (for example, see Flay, 1985) is the promising conclusion that reductions in smoking onset percentages have been achieved among adolescents. The trend, therefore, seems to point toward a decrease in the number of smokers who enter the Navy, a finding that will be re-evaluated in the next phase of this research to be conducted on a larger sample.

However, the military, and especially the Navy, continues to have higher percentages of smokers than reported in the civilian sector, approximately 40% among Navy personnel as contrasted with slightly more than 27% among civilians (Ballweg & Bray, 1989). A health promotion goal has been set to achieve a smoke-free Navy by the year 2000, which indicates that considerable work will have to be initiated and accomplished. Although this goal of attaining a smoke-free Navy by the year 2000 may be somewhat unrealistic, efforts should be expanded in support of the continuing downward trend in the percentage of smokers in the Navy.

Another goal of the Department of Defense and the Navy is to reduce the number of alcohol abusers on active duty. Results of this study show that the percentage of personnel who drink is almost 77.0%. This percentage represents a relatively large difference from the percentage (84.2%) of personnel who reported that they used alcohol in 1988 (Ballweg & Li, 1991). The trend across the years, as evidenced from survey results compiled in 1982, 1985, and 1988, is toward a decline in the proportion of alcohol users and an increase in the percentage of nondrinkers. Results of the

present study show increasing percentages of nondrinkers after the age of 20, which corresponds with similar percentage increases reported on samples of both military and civilian respondents in a 1985 survey (Ballweg & Li, 1989). In another study of alcohol use among military men, the proportion of men who reported heavy drinking has decreased from 20.8% in 1980 to 17.0% in 1990 (Bray, Marsden, Herbold, & Peterson, in press).

In comparison with results reported on a larger Navy sample, the current mean cholesterol levels for men (206.3 mg/dL) are somewhat lower than in the larger sample (209.0) and 182.6 versus 200.0 for women (Trent, 1989). These values are somewhat elevated and should be lowered, in accordance with another goal of the Navy's health promotion program. A goal to reduce the number of back injuries also has been promulgated, the achievement of which will have an impact on decreasing the high costs associated with noneffective days, hospitalizations, and compensation. Marcinik (1981) had recommended that strength conditioning programs be incorporated into recruit training to prepare personnel for the physical demands of shipboard work. A research project has been initiated at a recruit training center that was designed to evaluate the effectiveness of the Navy's Healthy Back Program in reducing back problems throughout a one-year, follow-up period. Comparisons of the incidence of subsequent back problems will be conducted between individuals who had participated in the program and those who had not.

Overall, results of this study are consistent with other research indicating that progress is continuing to be made in the direction of improved health and physical readiness among Navy men and women. In the next phase of this research and in future tracking surveillances, one of the objectives of monitoring Navy-wide health promotion data will be to identify the areas where progress should be enhanced and to target populations that need intervention programs. Results of the present effort suggest that smoking cessation efforts will have to be expanded if the goal of a smoke-free Navy is to be achieved even beyond the projected date of 2000.

The next phase of this study is to assess the effectiveness of the revised tracking form on a larger sample and to examine the feasibility of developing an electronic

health promotion tracking system that can be implemented Navy wide. Such a system could be used to obtain all of the requested information by having individuals and medical examiners respond directly onto a computer disk at a terminal. When individuals arrive for a physical examination, they would be asked to complete the questions presented on a terminal screen; additional items would be completed by the medical examiner. The disk with this information then could be forwarded to the appropriate health promotion monitor. For facilities that do not have computer terminal capabilities, hard copies of the form could be distributed for completion. Eventually, electronic health promotion tracking records may be created for all naval personnel at the time of service entry, to be updated as physical examinations are performed or at times when changes in health status occur. Through such endeavors, the Navy would be able to determine how well naval personnel are doing in terms of meeting health promotion objectives and to identify specific intervention programs that need to be expanded or initiated.

## REFERENCES

Ballweg, J. A., & Bray, R. M. (1989). Smoking and tobacco use by U.S. military personnel. Military Medicine, 154, 165-168.

Ballweg, J. A., & Li, L. (1989). Comparison of health habits of military personnel with civilian populations. Public Health Reports, 104, 498-509.

Ballweg, J. A., & Li, L. (1991). Trends in substance use by U.S. military personnel. Armed Forces and Society, 17, 601-618.

Bray, R. M., Marsden, M. E., Herbold, J. R., & Peterson, M. R. (in press). Progress toward eliminating drug and alcohol abuse among military personnel. Armed Forces and Society.

Conway, T. L., Hurtado, S. L., & Woodruff, S. I. (1990). Tobacco use programs at Navy commands: 1990 survey results (Technical Report No. 90-28). San Diego, CA: Naval Health Research Center.

Conway, T. L., Trent, L. K., & Conway, S. W. (1989). Physical readiness and life-style habits among U.S. Navy personnel during 1986, 1987, and 1988 (Technical Report No. 89-24). San Diego, CA: Naval Health Research Center.

Flay, B. R. (1985). Psychosocial approaches to smoking prevention: A review of the findings. Health Psychology, 4, 449-488.

Flay, B. R., Koepke, D., Thomson, S. J., Santi, S., Best, J. A., & Brown, K. S. (1989). Six-year follow-up of the first Waterloo school smoking prevention trial. American Journal of Public Health, 79, 1371-1376.

Marcinik, E. J. (1981). Sprain and strain injuries in the Navy: The possible role of physical fitness in their prevention (Technical Report No. 81-33). San Diego, CA: Naval Health Research Center.

Morbidity and Mortality Weekly Report. (1990). Journal of the American Medical Association, 39, 689-697.

Rothberg, J. M. (1987). Some thoughts on health promotion in the United States Army. Presentation at the Biennial Conference of the Inter-University Seminar on Armed Forces and Society, Chicago, Illinois.

Trent, L. K. (1989). Prevalence of elevated serum cholesterol among active duty Navy personnel (Technical Report No. 89-50). San Diego, CA: Naval Health Research Center.

U.S. Department of Health and Human Services (1989). Reducing the health consequences of smoking: 25 years of progress. Rockville, MD: Public Health Service.

Appendix A

**Tracking Health Promotion Data**

**INSTRUCTIONS:** Please darken the circle corresponding to the answer that best describes the individual's status.  
USE A DARK LEAD PENCIL - DO NOT USE INK - and be sure to fill in the circles completely.

SOCIAL SECURITY NUMBER	YEARS OF EDUCATION	AGE	TOTAL CHOLESTEROL mg/dl	HDL mg/dl	TRIGLYCERIDES mg/dl	RANK PAY GRADE	OVERALL PART CLASSIFICATION SCORE (As of Last PRT)
<input type="radio"/> Never married <input type="radio"/> Married or living as married <input type="radio"/> Separated/ <input type="radio"/> Divorced/ <input type="radio"/> Widowed						<input type="radio"/> Outstanding <input type="radio"/> Excellent <input type="radio"/> Good <input type="radio"/> Satisfactory <input type="radio"/> Fail <input type="radio"/> Pass <input type="radio"/> Total medical waiver	
<input type="radio"/> Caucasian <input type="radio"/> Black <input type="radio"/> Hispanic <input type="radio"/> American Indian/ <input type="radio"/> Alaskan Native <input type="radio"/> Asian <input type="radio"/> Pacific Islander <input type="radio"/> Filipino <input type="radio"/> Other						<input type="radio"/> Non-smoker <input type="radio"/> Former smoker <input type="radio"/> Less than 1 pack per day <input type="radio"/> 1-1.9 packs per day <input type="radio"/> 2 or more packs per day	
<input type="radio"/> Never used <input type="radio"/> Non-user now <input type="radio"/> Less than once per week <input type="radio"/> 1-4 times per week <input type="radio"/> 5-7 times per week <input type="radio"/> 8 or more times per week						<input type="radio"/> Never experienced <input type="radio"/> Once, no residuals <input type="radio"/> Once, residuals <input type="radio"/> Recurrent	
<input type="radio"/> Male <input type="radio"/> Female						<input type="radio"/> Present Status <input type="radio"/> Injured <input type="radio"/> Not injured	
						<b>COMMENTS:</b>  <input type="checkbox"/> Signature      Date	
<b>ALCOHOL USE</b> <input type="radio"/> Nondrinker <input type="radio"/> About 12 drinks per year <input type="radio"/> 1-3 drinks per week <input type="radio"/> 4-15 drinks per week <input type="radio"/> 16-35 drinks per week <input type="radio"/> More than 36 drinks per week <input type="radio"/> Drinkers Only <input type="radio"/> Former <input type="radio"/> Time Since Quitting Under 3 months <input type="radio"/> 3 to 6 months <input type="radio"/> 7 to 11 months <input type="radio"/> 1 to 2 years <input type="radio"/> Over 2 years							
<b>BLOOD PRESSURE CONTROL</b> <input type="radio"/> NA <input type="radio"/> Medication <input type="radio"/> Diet <input type="radio"/> Exercise <input type="radio"/> Weight control <input type="radio"/> Other							
<b>DIET</b> <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Balanced <input type="radio"/> Low fat <input type="radio"/> Low sodium							
<b>INJURIES DURING OFFICIAL PRT</b> <input type="radio"/> Not injured <input type="radio"/> Injured during: <input type="radio"/> Curl-up <input type="radio"/> Push-up <input type="radio"/> Sit-reach <input type="radio"/> 1.5 mile run <input type="radio"/> 500 yd. swim							
<b>% BODY FAT</b> <input type="radio"/> Normal <input type="radio"/> Over fat <input type="radio"/> Obese							
<b>SMOKELESS TOBACCO USE</b> <input type="radio"/> Never used <input type="radio"/> Non-user now <input type="radio"/> Less than once per week <input type="radio"/> 1-4 times per week <input type="radio"/> 5-7 times per week <input type="radio"/> 8 or more times per week							
<b>EXERCISE (Days per week)</b> <input type="radio"/> 0 <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 <input type="radio"/> 11 <input type="radio"/> 12 <input type="radio"/> 13 <input type="radio"/> 14 <input type="radio"/> 15 <input type="radio"/> 16 <input type="radio"/> 17 <input type="radio"/> 18 <input type="radio"/> 19 <input type="radio"/> 20 <input type="radio"/> 21 <input type="radio"/> 22 <input type="radio"/> 23 <input type="radio"/> 24 <input type="radio"/> 25 <input type="radio"/> 26 <input type="radio"/> 27 <input type="radio"/> 28 <input type="radio"/> 29 <input type="radio"/> 30 <input type="radio"/> 31 <input type="radio"/> 32 <input type="radio"/> 33 <input type="radio"/> 34 <input type="radio"/> 35 <input type="radio"/> 36 <input type="radio"/> 37 <input type="radio"/> 38 <input type="radio"/> 39 <input type="radio"/> 40 <input type="radio"/> 41 <input type="radio"/> 42 <input type="radio"/> 43 <input type="radio"/> 44 <input type="radio"/> 45 <input type="radio"/> 46 <input type="radio"/> 47 <input type="radio"/> 48 <input type="radio"/> 49 <input type="radio"/> 50 <input type="radio"/> 51 <input type="radio"/> 52 <input type="radio"/> 53 <input type="radio"/> 54 <input type="radio"/> 55 <input type="radio"/> 56 <input type="radio"/> 57 <input type="radio"/> 58 <input type="radio"/> 59 <input type="radio"/> 60 <input type="radio"/> 61 <input type="radio"/> 62 <input type="radio"/> 63 <input type="radio"/> 64 <input type="radio"/> 65 <input type="radio"/> 66 <input type="radio"/> 67 <input type="radio"/> 68 <input type="radio"/> 69 <input type="radio"/> 70 <input type="radio"/> 71 <input type="radio"/> 72 <input type="radio"/> 73 <input type="radio"/> 74 <input type="radio"/> 75 <input type="radio"/> 76 <input type="radio"/> 77 <input type="radio"/> 78 <input type="radio"/> 79 <input type="radio"/> 80 <input type="radio"/> 81 <input type="radio"/> 82 <input type="radio"/> 83 <input type="radio"/> 84 <input type="radio"/> 85 <input type="radio"/> 86 <input type="radio"/> 87 <input type="radio"/> 88 <input type="radio"/> 89 <input type="radio"/> 90 <input type="radio"/> 91 <input type="radio"/> 92 <input type="radio"/> 93 <input type="radio"/> 94 <input type="radio"/> 95 <input type="radio"/> 96 <input type="radio"/> 97 <input type="radio"/> 98 <input type="radio"/> 99 <input type="radio"/> 100							
<b>RACE/ETHNICITY</b> <input type="radio"/> Caucasian <input type="radio"/> Black <input type="radio"/> Hispanic <input type="radio"/> American Indian/ <input type="radio"/> Alaskan Native <input type="radio"/> Asian <input type="radio"/> Pacific Islander <input type="radio"/> Filipino <input type="radio"/> Other							
<b>HEIGHT (in inches)</b> <input type="radio"/> 4' 0 <input type="radio"/> 4' 2 <input type="radio"/> 4' 4 <input type="radio"/> 4' 6 <input type="radio"/> 4' 8 <input type="radio"/> 4' 10 <input type="radio"/> 4' 12 <input type="radio"/> 4' 14 <input type="radio"/> 4' 16 <input type="radio"/> 4' 18 <input type="radio"/> 4' 20 <input type="radio"/> 4' 22 <input type="radio"/> 4' 24 <input type="radio"/> 4' 26 <input type="radio"/> 4' 28 <input type="radio"/> 4' 30 <input type="radio"/> 4' 32 <input type="radio"/> 4' 34 <input type="radio"/> 4' 36 <input type="radio"/> 4' 38 <input type="radio"/> 4' 40 <input type="radio"/> 4' 42 <input type="radio"/> 4' 44 <input type="radio"/> 4' 46 <input type="radio"/> 4' 48 <input type="radio"/> 4' 50 <input type="radio"/> 4' 52 <input type="radio"/> 4' 54 <input type="radio"/> 4' 56 <input type="radio"/> 4' 58 <input type="radio"/> 4' 60 <input type="radio"/> 4' 62 <input type="radio"/> 4' 64 <input type="radio"/> 4' 66 <input type="radio"/> 4' 68 <input type="radio"/> 4' 70 <input type="radio"/> 4' 72 <input type="radio"/> 4' 74 <input type="radio"/> 4' 76 <input type="radio"/> 4' 78 <input type="radio"/> 4' 80 <input type="radio"/> 4' 82 <input type="radio"/> 4' 84 <input type="radio"/> 4' 86 <input type="radio"/> 4' 88 <input type="radio"/> 4' 90 <input type="radio"/> 4' 92 <input type="radio"/> 4' 94 <input type="radio"/> 4' 96 <input type="radio"/> 4' 98 <input type="radio"/> 4' 100							
<b>WEIGHT (in lbs.)</b> <input type="radio"/> 80 <input type="radio"/> 82 <input type="radio"/> 84 <input type="radio"/> 86 <input type="radio"/> 88 <input type="radio"/> 90 <input type="radio"/> 92 <input type="radio"/> 94 <input type="radio"/> 96 <input type="radio"/> 98 <input type="radio"/> 100 <input type="radio"/> 102 <input type="radio"/> 104 <input type="radio"/> 106 <input type="radio"/> 108 <input type="radio"/> 110 <input type="radio"/> 112 <input type="radio"/> 114 <input type="radio"/> 116 <input type="radio"/> 118 <input type="radio"/> 120 <input type="radio"/> 122 <input type="radio"/> 124 <input type="radio"/> 126 <input type="radio"/> 128 <input type="radio"/> 130 <input type="radio"/> 132 <input type="radio"/> 134 <input type="radio"/> 136 <input type="radio"/> 138 <input type="radio"/> 140 <input type="radio"/> 142 <input type="radio"/> 144 <input type="radio"/> 146 <input type="radio"/> 148 <input type="radio"/> 150 <input type="radio"/> 152 <input type="radio"/> 154 <input type="radio"/> 156 <input type="radio"/> 158 <input type="radio"/> 160 <input type="radio"/> 162 <input type="radio"/> 164 <input type="radio"/> 166 <input type="radio"/> 168 <input type="radio"/> 170 <input type="radio"/> 172 <input type="radio"/> 174 <input type="radio"/> 176 <input type="radio"/> 178 <input type="radio"/> 180 <input type="radio"/> 182 <input type="radio"/> 184 <input type="radio"/> 186 <input type="radio"/> 188 <input type="radio"/> 190 <input type="radio"/> 192 <input type="radio"/> 194 <input type="radio"/> 196 <input type="radio"/> 198 <input type="radio"/> 200							
<b>MARITAL STATUS</b> <input type="radio"/> Never married <input type="radio"/> Married or living as married <input type="radio"/> Separated/ <input type="radio"/> Divorced/ <input type="radio"/> Widowed							
<b>BLOOD PRESSURE DIASTOLIC mmHg</b> <input type="radio"/> 90 <input type="radio"/> 92 <input type="radio"/> 94 <input type="radio"/> 96 <input type="radio"/> 98 <input type="radio"/> 100 <input type="radio"/> 102 <input type="radio"/> 104 <input type="radio"/> 106 <input type="radio"/> 108 <input type="radio"/> 110 <input type="radio"/> 112 <input type="radio"/> 114 <input type="radio"/> 116 <input type="radio"/> 118 <input type="radio"/> 120 <input type="radio"/> 122 <input type="radio"/> 124 <input type="radio"/> 126 <input type="radio"/> 128 <input type="radio"/> 130 <input type="radio"/> 132 <input type="radio"/> 134 <input type="radio"/> 136 <input type="radio"/> 138 <input type="radio"/> 140 <input type="radio"/> 142 <input type="radio"/> 144 <input type="radio"/> 146 <input type="radio"/> 148 <input type="radio"/> 150 <input type="radio"/> 152 <input type="radio"/> 154 <input type="radio"/> 156 <input type="radio"/> 158 <input type="radio"/> 160 <input type="radio"/> 162 <input type="radio"/> 164 <input type="radio"/> 166 <input type="radio"/> 168 <input type="radio"/> 170 <input type="radio"/> 172 <input type="radio"/> 174 <input type="radio"/> 176 <input type="radio"/> 178 <input type="radio"/> 180 <input type="radio"/> 182 <input type="radio"/> 184 <input type="radio"/> 186 <input type="radio"/> 188 <input type="radio"/> 190 <input type="radio"/> 192 <input type="radio"/> 194 <input type="radio"/> 196 <input type="radio"/> 198 <input type="radio"/> 200							
<b>EXERCISE (Minutes per Session)</b> <input type="radio"/> Less than 15 min. <input type="radio"/> 15-30 min. <input type="radio"/> 31-60 min. <input type="radio"/> 61-120 min. <input type="radio"/> Over 120 min.							
<b>SEX</b> <input type="radio"/> Male <input type="radio"/> Female							

DEPARTMENT OF THE NAVY  
NAVAL HEALTH RESEARCH CENTER  
P.O. BOX 85122  
SAN DIEGO, CA 92186-5122

NAVAL HEALTH RESEARCH CENTER  
ATTENTION: ANNE HOIBERG  
P.O. BOX 85122  
SAN DIEGO, CA 92186-5122

**PRIVACY ACT STATEMENT**

1. Authority. SUSC 301 2. Purpose. Medical research information will be collected to enhance basic medical knowledge, or to develop tests, procedures, and equipment to improve the diagnosis, treatment, or prevention of illness, injury, or performance impairment. 3. Use. Medical research information will be used for statistical analysis and reports by the Departments of the Navy, Defense, and other U.S. Government agencies, provided this use is compatible with the purpose for which the information was collected. Use of the information may be granted to non-Government agencies or individuals by the Chief, Bureau of Medicine and Surgery, in accordance with the provisions of the Freedom of Information Act. 4. Disclosure. I understand that all information contained in the Consent Statement or derived from the study described therein will be retained at the Naval Health Research Center, San Diego, and that my anonymity will be maintained. I voluntarily agree to its disclosure to agencies or individuals identified in the preceding paragraph, and I have been informed that failure to agree to such disclosure may negate the purposes for which the study is being conducted.

**CONSENT STATEMENT**

This research, which is part of the "Health and Physical Readiness (HAPR) Program Evaluation," will be used to help develop an effective means of collecting health promotion and physical readiness data. Your participation involves having your health care provider complete items pertaining to your current physical condition, PRT test scores, cholesterol measures, blood pressure, life-style behaviors, etc. All of the data gathered will be stored at the Naval Health Research Center and will be used for research purposes only. The data provided by the thousands of participants will not become a part of anyone's official records and will be reported in such a way that no individual can be identified.

You are asked to voluntarily participate, and we hope that you will consent to have the requested information provided to us. There will be no direct benefits to you nor any risks or discomfort. Results of this study will help to develop a more efficient means of obtaining information. By signing this consent form, you are indicating that you understand the purpose of this study, and that you are free to withdraw your consent at any time without prejudice to you or your naval career. Should questions arise, please contact Anne Hoiberg, Naval Health Research Center, P.O. Box 85122, San Diego, CA 92186-5122, Autovon: 553-8461 or Commercial (619) 553-8461.

Name (please print)

Signature

Date

## Appendix B

# TRACKING HEALTH PROMOTION DATA

To the Navy Active Duty Member Recruit and a Routine Physical Examination:

You are being asked to participate in a project evaluating the usefulness of a health promotion tracking form. Please read the Privacy Act and Consent Statements. If you consent to participate please (1) print and sign your name on the lines below and (2) answer the items 'For the Patient' by completely darkening the circles with a NO. 2 pencil. Thank you for your participation!

### PRIVACY ACT STATEMENT

**Authority.** SUCSC 301-2 **PurPOSE.** Medical research information will be collected to enhance basic medical knowledge or to develop tests, procedures, and equipment to improve the diagnosis, treatment, or prevention of illness, injury, or performance impairment.

**Use.** Medical research information will be used for statistical analyses and reports by the Departments of Navy, Defense, and other U.S. Government agencies, provided this use is compatible with the purpose for which the information was collected. Use of the information may be granted to non-Government agencies or individuals by the Chief Bureau of Medicine and Surgery, in accordance with the provisions of the Freedom of Information Act. **Disclosure.** I understand that all information contained in the Consent Statement or derived from the study described herein will be retained at the Naval Health Research Center, San Diego, and that my anonymity will be maintained. I voluntarily agree to its disclosure to agencies or individuals identified in the preceding paragraph and I have been informed that failure to agree to such disclosure may negate the purposes for which the study is being conducted.

This research, which is part of the "Health and Physical Readiness Program (HAPR) Evaluation," will be used to develop an effective means of collecting health promotion and physical readiness data. Your participation also involves sharing your medical examiner complete serum, pertaining to your cholesterol and blood pressure levels. All of the data gathered will be stored at the Naval Health Research Center and will be used for research purposes only. The data will not become part of anyone's official records and will be reported in such a way that no individual can be identified. You are asked to indicate voluntariness, and we hope that you will consent to have the requested information provided to us. There will be no direct benefits to you nor any risks or discomfort. By signing this form, you are indicating that you understand the purpose of this study, and that you are free to withdraw your consent at any time without prejudice to you or your naval career. Should questions arise, please contact Susan Woodard, Naval Health Research Center, P.O. Box 85122, San Diego, CA 92186-3122. Autonum 553-8466 or Commercial (619) 553-8466.

<b>CONSENT STATEMENT</b>		<b>SEAT BELT USAGE</b>	
<p>Name (please print)</p> <p>Date _____</p>		<p>How much do you wear your seatbelt?</p> <p>(1) 10% of the time or less            (2) 11 - 50% of the time            (3) 51 - 75% of the time            (4) 76% - 95% of the time            (5) 96% - 100% of the time</p>	
<p>For the Patient</p>		<p>Routine physical examination            Follow-up to routine physical examination            Other</p>	
<p>Is this visit for a ...</p>		<p>EATING HABITS DURING THE PAST WEEK</p>	
<p>RANK PAY GRADE</p>		<p>How many times during the past week did you eat:</p>	
<p>SOCIAL SECURITY NUMBER</p>		<p>Breakfast Eggs Fish Low-fat meals High-fat meals Fruits Vegetables Salt (added to food) High fiber (grains, cereal) Low-fat dairy products High-fat dairy products Two much food (overeating)</p>	
<p>YEARS OF EDUCATION</p>		<p>SEX</p>	
<p>AGE</p>		<p>(1) Male (2) Female</p>	
<p>RACE/ ETHNICITY</p>		<p>MARITAL STATUS</p>	
<p>(1) Caucasian (2) Black (3) Hispanic (4) American Indian Alaskan Native (5) Asian (6) Pacific Islander (7) Filipino (8) Other</p>		<p>(1) Never married (2) Married or living as married (3) Separated (4) Divorced (5) Widowed</p>	
<p>Patient: Please continue on other side</p>			

For the Patient (Continued)

Exercise		Overall PRT Classification Score (From last PRT)						Any Injuries During Official PRT							
No. of times per week	<input type="radio"/> ① <input type="radio"/> ② <input type="radio"/> ③ <input type="radio"/> ④ <input type="radio"/> ⑤ <input type="radio"/> ⑥	<input type="radio"/> ① Outstanding <input type="radio"/> ② Excellent <input type="radio"/> ③ Good <input type="radio"/> ④ Satisfactory <input type="radio"/> ⑤ Fail <input type="radio"/> ⑥ Pass <input type="radio"/> ⑦ Total medical waiver						<input type="radio"/> ⑧ Never injured <input type="radio"/> ⑨ Injured during <input type="radio"/> ⑩ Curi-up <input type="radio"/> ⑪ Push-up <input type="radio"/> ⑫ Sit-up <input type="radio"/> ⑬ 1.5 mile run <input type="radio"/> ⑭ 500 yd swim							
Average time spent per exercise session	<input type="radio"/> ① None <input type="radio"/> ② Less than 15 min. <input type="radio"/> ③ 15-30 min <input type="radio"/> ④ 31-60 min <input type="radio"/> ⑤ 61-120 min <input type="radio"/> ⑥ Over 120 min														
														STOP HERE!	
ALCOHOL USE		BODY FAT (From last PRT)						THANK YOU FOR COMPLETING THIS SURV							
No. of drinks per year	<input type="radio"/> ① Non drinker <input type="radio"/> ② About 12 drinks per year <input type="radio"/> ③ 2-3 drinks per month <input type="radio"/> ④ 1-3 drinks per week <input type="radio"/> ⑤ 4-15 drinks per week <input type="radio"/> ⑥ 16-35 drinks per week <input type="radio"/> ⑦ More than 36 drinks per week	<input type="radio"/> ① Normal <input type="radio"/> ② Over 1st <input type="radio"/> ③ Obesity													
Time Since Quitting	<input type="radio"/> ① Less than 3 months <input type="radio"/> ② 3 to 6 months <input type="radio"/> ③ 7 to 11 months <input type="radio"/> ④ 1 to 2 years <input type="radio"/> ⑤ More than 2 years														
SMOKELESS TOBACCO USE															
Never smoked (< 100 cigarettes ever)	<input type="radio"/> ① Never used <input type="radio"/> ② Former user <input type="radio"/> ③ Less than once a month <input type="radio"/> ④ 1-4 times per month <input type="radio"/> ⑤ 2-6 times per week <input type="radio"/> ⑥ Once a day <input type="radio"/> ⑦ 2-3 times per day <input type="radio"/> ⑧ 4 or more times per day														
Former Smokers Only															
Time Since Quitting	<input type="radio"/> ① Less than 3 months <input type="radio"/> ② 3 to 6 months <input type="radio"/> ③ 7 to 11 months <input type="radio"/> ④ 1 to 2 years <input type="radio"/> ⑤ More than 2 years														
SMOKING TOBACCO USE															

For the Medical Examiner

To the Medical Examiner:

For the next few weeks, have every Navy active duty member receiving a annual physical examination complete the consent form in the "Patient" section using a No 2 pencil. Please check the patient-provided information for completeness.

o Return completed forms on the designated envelope to: Naval Health Research Center, P.O. Box 85122, San Diego, CA 92186-5122

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DEPARTMENT OF THE NAVY  
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# REPORT DOCUMENTATION PAGE

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6. AUTHOR(S) Anne Hoiberg and Jack White		8. PERFORMING ORGANIZATION	
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11. SUPPLEMENTARY NOTES			
12a. DISTRIBUTION/AVAILABILITY STATEMENT  Approved for public release; distribution is unlimited.		12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words)  The purpose of this pilot study was (a) to create a machine-scannable instrument to be used to collect health promotion information on Navy personnel and (b) to evaluate the effectiveness of the form in terms of understandability and efficiency. Although the overall response rate per item was quite high, problem items included those pertaining to respondents' diet, back injuries, blood pressure levels, and cholesterol measures. Other results identified decreases in tobacco and alcohol use from findings of previous research. Cholesterol levels and percentages of back problems increased with age. In general, progress is being made toward improved health and physical readiness among Navy personnel. The next phase is to examine the effectiveness of the revised tracking form on a larger sample and to examine the feasibility of developing an electronic health promotion tracking system that can be implemented Navy wide.			
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